

contain themselves in that posture as long as they please; nay, to walk and suspend themselves against the under surface of many bodies, as the ceiling of a room, or the like, and this with as great a seeming facility and firmness, as if they were a kind of *Antipodes*, and had a *tendency* upwards, as we are sure they have the contrary, which they also evidently discover, in that they cannot make themselves so light, as to stick or suspend themselves on the under surface of a Glass well polish'd and cleans'd; their suspension therefore is wholly to be ascrib'd to some Mechanical contrivance in their feet; which, what it is, we shall in brief explain, by shewing, that its Mechanism consists principally in two parts, that is, first its two Claws, or Tallons, and secondly, two Palms, Pattens, or Soles.

The two Tallons are very large, in proportion to the foot, and handsomely shap'd in the manner describ'd in the *Figures*, by A B, and A C, the bigger part of them from A to *dd*, is all hairy, or bristled, but toward the top, at C and B smooth, the tops or points, which seem very sharp turning downwards and inwards, are each of them mov'd on a joint at A, by which the Fly is able to open or shut them at pleasure, so that the points B and C being entered in any pores, and the Fly endeavouring to shut them, the Claws not onely draw one against another, and so fasten each other, but they draw the whole foot, G G A D D forward, so that on a soft footing, the tenters or points G G G G, (whereof a Fly has about ten in each foot, to wit, two in every joint) run into the pores, if they find any, or at least make their way; and this is sensible to the naked eye, in the feet of a *Chafer*, which, if he be suffer'd to creep over the hand, or any other part of the skin of ones body, does make his steps as sensible to the touch as the sight.

But this contrivance, as it often fails the *Chafer*, when he walks on hard and close bodies, so would it also our Fly, though he be a much lesser, and nimbler creature, and therefore Nature has furnish'd his foot with another *additament* much more curious and admirable, and that is, with a couple of Palms, Pattens or Soles D D, the structure of which is this:

From the bottom or under part of the last joint of his foot, K, arise two small thin plated horny substances, each consisting of two flat pieces, D D, which seem to be flexible, like the covers of a Book, about F F, by which means, the plains of the two sides E E, do not always lie in the same plain, but may be sometimes shut closer, and so each of them may take a little hold themselves on a body; but that is not all, for the under sides of these Soles are all beset with small bristles, or tenters, like the Wire teeth of a Card used for working Wool, the points of all which tend forwards, hence the two Tallons drawing the feet forwards, as I before hinted, and these being applied to the surface of the body with all the points looking the contrary way, that is, forwards and outwards, if there be any irregularity or yielding in the surface of the body, the Fly suspends it self very firmly and easily, without the access or need of any such Sponges fill'd with an imaginary *gluten*, as many have, for want of good Glasses, perhaps, or a troublesome and diligent examination, suppos'd.

Now, that the Fly is able to walk on Glass, proceeds partly from some ruggedness



Fig. 4

